



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Thomas A. Koes

Examiner: Sin J. Lee

Serial No: 09/995,880

Art Unit: 1752

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Docket: 17294

For: PHOTORESIST COMPOSITION

Dated: May 23, 2005

Confirmation No.: 1611

Mail Stop Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

PRELIMINARY RESPONSE UNDER 37 C.F.R. §1.111

Sir:

This is in further response to the Official Action dated August 18, 2004.

All the claims submitted for examination in the present application have been objected to and/or rejected. Applicant amended his claims in an Amendment filed February 22, 2005 which was not entered because the proposed Amendment raised new issues requiring further search. Specifically, the Advisory Action dated March 17, 2005 indicates that the limitation in the amended claims regarding the amount of organic acid requires further search.

Applicant, by his instant refiling of the present application as a RCE application,

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on May 23, 2005.

Dated: May 23, 2005


Marvin Bressler

appreciates that the Amendment filed February 22, 2005 will now be entered and considered.

Applicant submits that the amendment to the claims in that Amendment overcomes the grounds imposed in the Official Action dated August 18, 2004.

Applicant adopts the arguments advanced in applicant's Amendment under 37 C.F.R. § 1.116, filed February 22, 2005, in support of the proposition that the amended claims of the present application overcome the objections and rejection of record.

Suffice it to say, the amendments to the claims made in applicant's Amendment under 37 C.F.R. § 1.116 not only clearly overcomes the objections and formal grounds of rejection but, furthermore, establishes the patentability of the amended claims currently in this application, Claims 1-20, over the substantive ground imposed in the outstanding Official Action, imposed under 35 U.S.C. § 103(a), as being unpatentable over U.S. Patent No. 6,004,725 to Barr et al.

Those remarks emphasize that an organic acid concentration in the range of from 0.5 to 5 parts per 40 parts of polymeric binder clearly distinguishes the composition of the present application over the composition disclosed in Barr et al.

As stated in applicant's Amendment under 37 C.F.R. § 1.116, the claimed concentration range of between 0.5 and 5 parts per 40 parts of polymeric binder on a dry weight basis is equivalent to a concentration range of between 1.25 and 12.5 weight %, again on a total dry weight basis of the polymeric binder. As such, the lower limit of organic acid concentration of the claimed photoresist composition is more than an order of magnitude greater than the concentration of organic acid employed in the Barr et al. photoresist composition.

The further remarks made in the Amendment under 37 C.F.R. § 1.116 emphasize why this extreme difference in concentration predicates patentability over the rejection of record.

However, in a surfeit of caution and to eliminate any possibility that the applied Barr et al. reference creates a *prima facie* case of obviousness, which applicant strenuously denies, applicant submits herewith a Declaration by a technical expert, Mr. Yang, an employee of the Assignee of the above-identified application. That Declaration establishes that the organic acid concentration range of the photoresist composition of the present invention establishes an unexpected result over prior art photoresist compositions, illustrated by Barr et al., which are outside the claimed range.

As indicated in the showing provided in the enclosed Declaration under 37 C.F.R. §1.132, photoresist compositions which include no organic acid or an organic acid in a concentration less than the required concentration recited in the claims of the present application require a period of time to be stripped and completely removed in excess of the time required to remove photoresist compositions within the scope of the present application wherein an organic acid, present in an amount of from 0.5 to 5 parts per 40 parts of polymeric binder on a dry rate basis, is present.

It is appreciated that Sample I which includes the same organic acid, o-phthalic acid, included in Samples E, F, G and H, the latter three of which include the organic acid in a concentration within the range of that claimed in the amended claims of the present application, is present in a concentration in excess of the amended claimed range. It is furthermore appreciated that the stripping rate for Sample I is even faster than those within the scope of the present application, Sample F to H.

However, attention is directed to the adhesion and resolution of Sample I. The required thickness of that photoresist to provide the requisite adhesion and resolution was 32 and 31 microns, respectively. That is in excess of the thicknesses required of Samples F, G and H,

photoresists within the claimed range of the present application, to provide the requisite adhesion and resolution. As such, the claimed photoresist composition, which include a concentration of organic acid within the claimed range of the present application, provide an unexpected result over photoresists of the prior art which are outside the claimed range. Only the claimed organic acid concentration of the claimed photoresist of the present application provides a combination of properties not provided by prior art photoresist compositions.

The above remarks, when taken with the remarks made in the Amendment under 37 C.F.R. §1.116 and with the enclosed Declaration under 37 C.F.R. §1.132, establish the patentable nature of the claims of the present application over the substantive ground of rejection imposed under 35 U.S.C. §103(a). Reconsideration and removal of the substantive ground of rejection is therefore deemed appropriate. Such action is respectfully urged.

The above remarks, when taken with the enclosed Declaration, establish that the claims presently in this application, as set forth in the Amendment under 37 C.F.R. §1.116, establish the patentable nature of all the claims currently in this application. Notice of Allowance and passage to issue of these claims, Claims 1-20, is therefore respectfully solicited.

Respectfully submitted,



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